

14, 16 are advanced by nip rollers 20a, b (and also longitudinal seals 42a, b formed thereby), dispenser 24 dispenses fluid product 40 into the partially-formed container 22 as the container is being formed.--

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. Such attachment is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

REMARKS

Specification

The specification has been corrected as recommended by the helpful suggestion of the Examiner.

Claim Rejections

Claims 1-3, 10-12 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Sperry et al. (U.S. Pat. No. 5,255,847) in view of Schmitter (U.S. Pat. No. 5,129,580).

Sperry discloses a cartridge-type fluid dispenser for mixing and dispensing a foamable composition in a foam-in-place packaging system. The cartridge 12 includes a sintered tip 20 having an opening 35 through which both the foamable composition and a valving rod 16 pass, with the valving rod moving within the dispenser to control the flow of the foamable composition from the dispenser (col. 3, lines 12-49). Foamable composition is cleaned from the frusto-conical face or surface 36 of the tip 20 by forcing an air-solvent mixture through the sintered tip (col. 3, line 50 through col. 4, line 3; see also col. 1, lines 49-56). The solvent and air mixture is supplied by an external submersible pump 40 and compressed air source 41 through respective tubes 44 and 45 (col. 4,

lines 4-18). The solvent and air is introduced into the tip 20 via an opening 32 in the cartridge 12 (col. 3, lines 36-37).

As indicated in the first full paragraph at page 3 of the Office Action, Sperry does not disclose the claimed valving rod having a central bore, at least one inlet for receiving a cleaning solvent, and one or more outlet ports capable of directing the cleaning solvent radially outwards against the interior surface of the housing.

Schmitter is therefore cited for its teaching of a device to spray “disperse systems,” such as a suspension containing graphite as the disperse phase and a liquid as the dispersing agent (col. 1, line 57 through col. 2, line 3). The device includes a plunger 1 with an intake duct 3 for the disperse system, from which two output ducts or bores 4 branch off toward the inside wall of the spray head 5 at the discharge end of the device (col. 3, lines 7-27).

Schmitter’s plunger is analogous to the claimed “valving rod;” similarly, the disperse system sprayed from the Schmitter device is analogous to the “fluid product” that flows through the internal chamber and exits the discharge port of the claimed fluid dispenser. In operation, the intake duct 3 is supplied with fluid product, which is maintained under a pressure of 5-100 bars, via supply element 13 (col. 4, lines 1-6). During the spraying process, the valving rod 1 moves back against the force of spring 8 by the spraying pressure from spray head 5 as the fluid product from output ducts 4 strike the inside wall of the spray head (col. 3, lines 24-27 and lines 44-47). When the spraying pressure drops to an undesired volume, pressure from spring 8 shoves the conical tip of the valving rod into the opening of nozzle 7 (col. 3, lines 47-49).

Schmitter does not, however, disclose a separate flow-path for a cleaning solvent as claimed. In fact, Schmitter does not disclose a cleaning solvent at all. Instead, it is the fluid product, not a cleaning

solvent, that flows through the valving rod of Schmitter. To clean the spray device, Schmitter teaches that the valving rod is controlled “so that, after stopping of the feeding of the disperse system, it is pressed into the hole type nozzle, thereby at the same time cleaning and securely sealing the hole type nozzle.” (Col. 4, lines 23-26.) That is, the tip of Schmitter’s valving rod cleans the discharge nozzle 7 by being pressed into the nozzle 7 by force of spring 8, “by which particles possibly clogging the hole type nozzle are pressed out through the latter.” (Col. 4, lines 9-15; also col. 3, lines 44-49.)

Accordingly, Applicants respectfully submit that while Schmitter teaches a dispenser in which a fluid product is sprayed through a valving rod, it does not teach means for directing a cleaning solvent through the valving rod to remove fluid product from the inside of the dispenser, wherein the fluid product flows through the dispenser via a separate flow-path inside of the dispenser as claimed. Thus, if one were to modify Sperry in accordance with the teachings of Schmitter, the resultant dispenser would not have a flow-path within the valving rod for a cleaning solvent, with a separate flow-path in the dispenser (but outside of the valving rod) for a fluid product as claimed. Claims 1-3 and 10-12, therefore, are believed to be patentable over the combination of Sperry with Schmitter because such combination does not result in the invention as defined in those claims.

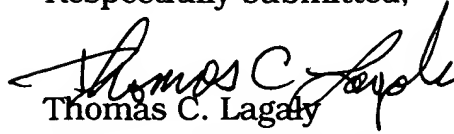
Finally, Applicants respectfully submit that neither Sperry nor Schmitter discloses a “conduit providing fluid communication between said internal reservoir and said discharge port to deliver cleaning solvent to said discharge port,” as recited in claim 20. Sperry does not disclose an internal reservoir from which cleaning solvent is delivered to the discharge port. Instead, Sperry teaches that solvent is delivered to the

sintered tip/discharge port by a submersible pump 40 via tube 45, with the pump being submerged in an external supply of solvent. Col. 4, lines 4-18; also FIG. 5. While Sperry's valving rod 16 may be retracted to leave a fluid flow path between fluid product openings 14 and 15 and the terminal end of the housing where the fluid product (foam precursors) exits the housing at sintered tip 20 (col. 3, lines 17-20), this is not a fluid flow path between any internal solvent reservoir within the Sperry '847 dispenser and the discharge port thereof. Nowhere does Sperry disclose a conduit for delivering solvent from a reservoir within the dispenser to the discharge port, and thus also does not disclose such a conduit "positioned externally of" the dispenser, as also recited in claim 20. As noted above, Schmitter does not disclose a cleaning solvent or any means for delivering a cleaning solvent against the interior surface of a dispenser. Accordingly, Applicants respectfully submit that claim 20 is patentable over Sperry and Schmitter.

Applicants acknowledge with gratitude the indication of allowable subject matter relative to claims 4-7, 9, 13-16, and 19.

For all of the foregoing reasons, Applicants submit that all of the claims as currently presented are patentably distinct from the references of record and are, therefore, in condition for allowance. A Notice of Allowance is earnestly solicited.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In th sp cification:

Sentence beginning at page 12, line 7 has been amended as follows:

-- In a process that is also well described in the above-incorporated patents, transverse bottom seal 46 is first formed then, as the film webs 14, 16 are advanced by nip rollers 20a, b (and also longitudinal seals 42a, b formed thereby), dispenser 24 dispenses fluid product 40 into the partially-formed container ~~16~~ 22 as the container is being formed.--